

Application No. 09/560294
Amendment dated February 6, 2006
Reply to Office Action of January 12, 2006

Docket No.: 013217.0127C1US
(Nielsen 3)

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A system for load balancing for wireless communication networks having a plurality of cells, each cell adapted to serve a plurality of mobile subscriber stations, comprising:

means, responsive to receipt of a service request from a mobile subscriber station, for establishing a communication connection for said requesting mobile subscriber station via at least one of said plurality of cells;

means for determining when assignment of said mobile subscriber station to a cell results in a predetermined threshold being exceeded, comprising:

means for measuring a traffic load in said cell,

means for comparing said measured traffic load to a predetermined traffic load threshold;

means, responsive to said predetermined threshold being exceeded, for identifying at least one of a plurality of mobile subscriber stations served by said cell for reassignment to another cell.

Claim 2 (Canceled)

3. (Previously presented) The system for load balancing of claim 1 wherein said means for identifying comprises:

means for determining a class of service for said plurality of mobile subscriber stations served by said cell;

means for selecting at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell; and

means for identifying another cell capable of serving said selected at least one mobile subscriber station.

4. (Currently amended) The system for load balancing of claim 3 wherein said means for selecting comprises:

means for arbitrating among ones of at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell, using additional criteria selected from call management factors, including such as: duration of call

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connection, location of mobile subscriber within the cell, proximity to an adjacent cell, and signal strength in adjacent cells, ~~and the like~~.

5. (Original) The system for load balancing of claim 3 wherein said means for identifying further comprises:

means for effecting a handoff of a communication connection that serves said selected at least one mobile subscriber station from said cell to said another cell.

6. (Currently amended) The system for load balancing of claim 5 wherein said means for identifying further comprises:

means, responsive to said means for effecting, for reviewing the ~~secondary~~ additional criteria to determine whether additional handoffs of mobile subscriber stations to other cell sites is advisable.

7. (Previously presented) A method of load balancing for wireless communication networks having a plurality of cells, each cell adapted to serve a plurality of mobile subscriber stations, comprising the steps of:

establishing, in response to receipt of a service request from a mobile subscriber station, a communication connection for said requesting mobile subscriber station via at least one of said plurality of cells;

determining when assignment of said mobile subscriber station to a cell results in a predetermined threshold being exceeded, comprising:

measuring a traffic load in said cell,

comparing said measured traffic load to a predetermined traffic load threshold;

identifying, in response to said predetermined threshold being exceeded, at least one of a plurality of mobile subscriber stations served by said cell for reassignment to another cell.

Claim 8 (Canceled)

9. (Previously presented) The method of load balancing of claim 7 wherein said step of identifying comprises:

determining a class of service for said plurality of mobile subscriber stations served by said cell;

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selecting at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell; and
identifying another cell capable of serving said selected at least one mobile subscriber station.

10. (Currently amended) The method of load balancing of claim 9 wherein said step of selecting comprises:

arbitrating among ones of at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell, using additional criteria selected from call management factors, including such as: duration of call connection, location of mobile subscriber within the cell, proximity to an adjacent cell, and signal strength in adjacent cells; and the like.

11. (Original) The method of load balancing of claim 9 wherein said step of identifying further comprises:

effecting a handoff of a communication connection that serves said selected at least one mobile subscriber station from said cell to said another cell.

12. (Currently amended) The method of load balancing of claim 11 wherein said step of identifying further comprises:

reviewing, in response to said step of effecting, the ~~secondary~~ additional criteria to determine whether additional handoffs of mobile subscriber stations to other cell sites is advisable.

13. (Previously presented) A system for load balancing for wireless communication networks having a plurality of cells, each cell adapted to serve a plurality of mobile subscriber stations, comprising:

service request processing means, responsive to receipt of a service request from a mobile subscriber station, for establishing a communication connection for said requesting mobile subscriber station via at least one of said plurality of cells;

traffic load determining means for determining when assignment of said mobile subscriber station to a cell results in a predetermined threshold being exceeded, comprising:

traffic load measurement means for measuring a traffic load in said cell,

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traffic threshold means for comparing said measured traffic load to a predetermined traffic load threshold;

subscriber class of service identification means, responsive to said predetermined threshold being exceeded, for identifying at least one of a plurality of mobile subscriber stations served by said cell for reassignment to another cell.

Claim 14 (Canceled)

15. (Previously presented) The system for load balancing of claim 13 wherein said subscriber class of service identification means comprises:

class of service means for determining a class of service for said plurality of mobile subscriber stations served by said cell;

mobile subscriber station selection means for selecting at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell; and

candidate cell means for identifying another cell capable of serving said selected at least one mobile subscriber station.

16. (Currently amended) The system for load balancing of claim 15 wherein said mobile subscriber station selection means comprises:

additional criteria determining means for arbitrating among ones of at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell, using additional criteria selected from call management factors, including such as: duration of call connection, location of mobile subscriber within the cell, proximity to an adjacent cell, and signal strength in adjacent cells, ~~and the like~~.

17. (Original) The system for load balancing of claim 15 wherein said subscriber class of service identification means further comprises:

handoff activation means for effecting a handoff of a communication connection that serves said selected at least one mobile subscriber station from said cell to said another cell.

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18. (Currently amended) The system for load balancing of claim 17 wherein said subscriber class of service identification means further comprises:

threshold review means, responsive to said handoff activation means, for reviewing the ~~secondary~~ additional criteria to determine whether additional handoffs of mobile subscriber stations to other cell sites is advisable.